Jharana Sapkota

Virginia (Open to relocation) | jharanasapkota09@gmail.com | 540-605-0749 | [Portfolio](#) | [LinkedIn](#) | [GitHub](#)

Skills

Languages: Java, JavaScript, Python, Dart, SQL
Technologies: Node.js, React.js, Docker, Flutter, MongoDB, MariaDB, D3.js, Git, Laravel

Experiences

Graduate Research and Teaching Assistant, Virginia Tech – Blacksburg, VA   Jan 2024 – Present

- Implemented LTI 1.3 and developed additional features for e-learning platforms like Canvas and WebCAT, designing scalable backend models and APIs using Node.js, MariaDB, and Docker to enhance tool integration and data processing efficiency
- Conducting research on time-series forecasting for environmental monitoring, developing a machine learning model to predict air pollution levels with improved accuracy and adaptive learning techniques
- Assisted in teaching undergraduate-level courses in computer science, specializing in Data Structure and Algorithm

Mobile Application Developer, Skybase Innovations – Pokhara, Nepal   Nov 2021 – June 2023

- Developed and deployed high-performance cross-platform mobile apps using Flutter and Dart, achieving over 10,000+ downloads on Google Play and App Store
- Integrated RESTful APIs, Firebase, and third-party libraries to ensure seamless data connectivity, enhancing app functionality, performance, and user experience
- Collaborated in Agile teams, delivering 10+ apps with clean code and efficient state management
- Designed responsive UI/UX with Flutter widgets, enhancing user engagement by 20%

Front-end Developer, Skybase Innovations – Pokhara, Nepal   Jan 2021 – Nov 2021

- Built dynamic, responsive web applications using modern front-end technologies and frameworks, focusing on performance, scalability, and seamless user experiences
- Collaborated with UI/UX designers to refine user flows and interfaces, ensuring intuitive and visually appealing experiences that enhanced user engagement

Projects

Aayo   [View on Google Play](#)

- Contributed to building a ride-sharing app to address transportation issues in Pokhara Valley, improving ride efficiency and sustainability. **Tools:** Java, Laravel, OpenStreetMap API

Help for SEE   [View on Google Play](#)

- Developed an exam preparation app for Medical, Paramedical, and Engineering entrance exams, providing study materials and mock tests. **Tools:** Dart, Flutter

Bhoklayo   [View on Google Play](#)

- Led the development of an app designed to streamline food delivery services. **Tools:** Dart, Node.js, Flutter

Gamified Visualization of MDS   [View on Observable](#)

- Collaborated on a gamified Multidimensional Scaling (MDS) visualization tool to help users understand high-dimensional data through interactive 2D projections. **Tools:** D3.js, Observable

Ghardurbar   [View Website](#)

- Designed and developed a complete dynamic and responsive website for a team of Engineers, Architects, and Realtors specializing in home inspections. **Tools:** HTML/CSS, JavaScript, PHP,Laravel, Figma

PCH - Paschimanchal Community Hospital   [View Website](#)

- Designed and developed a fully dynamic and responsive website for Paschimanchal Community Hospital with a focus on intuitive UI/UX. **Tools:** HTML/CSS, JavaScript, PHP, Laravel

Interactive Floor Plan Visualization   [View on Observable](#)

- Developed an interactive visualization overlaying sensor data on a floor plan, enabling real-time data insights. **Tools:** D3.js, Observable, JavaScript

Rolling CNN+LSTM Model for Forecasting of Air Pollutant Levels   [View on Google Colab](#)

- Developed a CNN+LSTM model for real-time air pollution forecasting, implementing data preprocessing and sequential modeling with TensorFlow/Keras and Matplotlib. **Tools:** Python, TensorFlow/Keras, Pandas

Education

Virginia Tech MS in Computer Science – Blacksburg, VA   Jan 2024 – Present

Pokhara University, Bachelor of Computer Information System(IT) – Pokhara, Nepal   Sept 2017 – Aug 2022